



CDC, EPA CLINICAL EXPOSURE STUDY FINDS BPA EXPOSURE UNLIKELY TO CAUSE HEALTH EFFECTS

North American Metal Packaging Alliance, Inc. Lauds Study Findings; BPA Not Detectable in Blood Even at Highest Concentrations

Washington, D.C. (September 7, 2011): Government scientists recently completed a landmark human exposure study providing definitive evidence that adverse health effects from bisphenol A (BPA) are highly unlikely. Funded entirely by the U.S. Environmental Protection Agency (EPA), the study was conducted by a team of expert researchers from the Pacific Northwest National Laboratory, the U.S. Food and Drug Administration (FDA), and the Centers for Disease Control and Prevention (CDC).

In the paper to be published this month in the *Journal of Toxicological Sciences*, researchers found that even when a typical diet was altered to ensure that high concentrations of BPA were ingested, the levels of non-metabolized BPA (*i.e.*, “free” BPA) in blood were below the level of detection. That is several orders of magnitude lower than levels associated with potentially adverse health effects.

“This study offers definitive evidence that even the highest exposure levels of BPA from food contact application did not allow for measurable amounts of the chemical to be detected in the human blood stream,” said Dr. John Rost, Chairman of the North American Metal Packaging Alliance, Inc. (NAMPA). “This study is important for consumers because, despite all the media hype about the dangers of BPA, it debunks the myth that BPA exposure through diet is harmful.”

The clinical exposure study, the first of its kind, collected blood and urine samples from 20 volunteers who consumed three meals of canned foods lined with a BPA based coating. While studies examining the amount of BPA people are consuming through diet have been extensively researched, such studies are not helpful for assessing possible impacts on human health. Measuring the amount of BPA entering the body does not assess levels of free BPA found in the bloodstream, or how efficiently it is metabolized and removed from the bloodstream. The EPA study is the most sophisticated analysis of internal exposure, or how the body processes BPA. It is critical to understand the internal exposure and metabolic processing of BPA in people to assess effectively whether the oft-referenced animal studies actually are relevant to human exposure.

“People have heard that 93% of the U.S. population have BPA in them, but the mere presence of BPA doesn’t mean it is harmful,” Dr. Rost continued. “What people aren’t told is that the BPA is measured as the BPA-metabolite in urine, which means the human body is metabolizing and clearing it efficiently and effectively from the body.”

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The study results indicate that the human body is extremely efficient at processing BPA from the body and is so effective that levels of free BPA are undetectable.

- Free BPA was below the limit of detection in all 320 blood samples analyzed by the CDC lab, even for samples with detectable total BPA. Based on their results, the authors note that high levels of BPA in blood reported in other studies are unlikely to be valid.
- Total BPA was detected in only 14% of the 320 blood samples, only one of which was above 1 part per billion (ppb). Total BPA was below the sensitive limit of detection (0.3 ppb) for 86% of the samples.

The work of Teeguarden *et al.* demonstrates for the first time in a large clinical study that because of the way BPA is processed in the body, it is highly unlikely that BPA could cause health effects. Moreover, the findings call into question other studies reporting high levels of BPA in spot testing of urine or blood. The authors suggest that “infrequent positive determinations near the detection limit should be suspect” and “thus, some attributions of high blood BPA concentrations from oral exposure seem implausible.”

The findings raise serious questions of the human relevance of many, if not all, studies that have purported to show adverse effects from BPA, and or studies that utilize methods of exposure that bypass the normal metabolic pathway from oral exposure in humans. Scientists and toxicologists across the globe have hailed the study as “beautifully designed” in *Forbes* and agree with the findings that indicate health effects from BPA in the general population are unlikely at best.

The study can be found at <http://www.ncbi.nlm.nih.gov/pubmed/21705716>.

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About NAMPA

The North American Metal Packaging Alliance, Inc. and its members support sound science and trust the scientific review process that has protected our food supply for decades. For further information, visit www.metal-pack.org.